

East African Medical Journal Vol. 98 No. 10 October 2021

RESEARCH PARTICIPATION AND UTILIZATION AMONG CLINICAL NURSES IN A SOUTHWESTERN TERTIARY HEALTH INSTITUTION, NIGERIA

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**RESEARCH PARTICIPATION AND UTILIZATION AMONG CLINICAL NURSES  
IN A SOUTHWESTERN TERTIARY HEALTH INSTITUTION, NIGERIA**

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**ABSTRACT**

***Objective:*** This study assessed research participation; determined attitude toward research utilization; identified barriers and facilitators to research participation and utilization among clinical nurses.

***Design:*** Descriptive cross-sectional research design.

***Setting:*** Obafemi Awolowo University Teaching Hospital Complex, Ile Ife, Nigeria.

***Participants:*** A sample size of 265 nurses that was randomly selected from the target population

***Intervention:*** A Structured questionnaire adapted from two Standard Scales, tested for validity and reliability was used to collect data that was analysed using Statistical Package Social Sciences (SPSS) version 25.0. Descriptive and inferential statistics were employed to present the data and test the hypothesis at a significance level of 0.05.

***Outcome Measures:*** Research participation, attitude toward participation and utilization, barriers and facilitators to research participation and utilization among nurses

***Results:*** Results revealed that majority of the respondents (94.7%) participated in Nursing research, while 64.2% had a positive attitude towards research Utilization in clinical practice.

Almost half (49.8%) of the respondents perceived workload and staff shortage as the leading barriers to research utilization while 72.1% identified mandatory training as the major facilitator to Research participation and utilization in clinical practice.

**Conclusion: This study concluded that nurses participate in research and they demonstrated positive attitudes towards research utilization but there is need for nurses to overcome the barriers to research participation and utilization in order to promote evidenced based practice.**

## INTRODUCTION

The origin of nursing research has been traced to Florence Nightingale, the mother of modern nursing during the Crimean war of 1850s [1]. It was affirmed that Nightingale identified research questions in her nursing practice and undertook a systematic collection of data in an attempt to find answers to the problem [2]. Applying her knowledge of statistics, she analysed the data and this led to changes in the environment of the sick soldiers in form of cleanness, ventilation, clean water and adequate diet that subsequently reduced morbidity and mortality from 40% to 2%.

In countries like United States of America, United Kingdom, the Nordic countries and Brazil, nursing education and research are making good progress with more nurses attaining higher degrees and getting involved in research. For example, in a 2012 survey in United States of America, an increase in nursing research focused doctoral programmes in 2013 from 125 to 131 with an increase in enrolment of 4.1% from the previous year was reported [3]. Likewise, in Finland, currently, there are approximately a total of 300 doctorate degree holders in nursing science involved in research [4]. In Africa, only a few countries like South Africa, Malawi, and Kenya have adequate infrastructure such as well-equipped lecture rooms, e-learning platforms, updated libraries with electronic resource portals and advanced information technology for the education and training of doctoral-prepared nurses, while countries like

Ghana and Nigeria are emerging slowly in this area [5].

The efforts of research evolution in nursing field, at bridging the gap between theory and everyday clinical practice still remains a challenge for the nursing world. In a study conducted in Kenya, it was stated that utilization of research in nursing practice has not been studied despite its prescription in the scope of practice for nurses by Nursing Council of Kenya [6].

In addition, in 2010, there were 160 nurses registered for their doctoral degree at the 17 university nursing schools in South Africa with 41 doctoral graduates and approximately 80 nursing research articles published in accredited journals each year [7]. Any data on the number of published nursing research in Nigeria could not be retrieved. Probably they could not be retrieved through the known international databases.

It is widely proven that a body of updated knowledge that consists of theory and clinical practice synthesizes what we called Nursing science. It is notable the speed of steps made in nursing research over the last decade and nurses should leave the old traditional methods and replace them with new scientific data.

Overall, research findings can be used as a scientific guide for nurses, advance their field and offer better patient care. Nurses can make their practice easier and effective, but this presupposes the right application of research by nurse' researchers and organizations suitable for the incorporation of research into practice [8]

In a cross-sectional survey conducted in Nigeria by Oluwatosin on conduct and utilization of research among nurses, the findings showed that only very few (16.9%) nurses had participated in clinical research [9]. This is similar to the report of a study in China where only 15.6% of the respondents participated in clinical research [10]. It is surprising that even in the China where the number of nurses with bachelor's degree or more were almost 50%, very few of the nurses conducted clinical research [10].

There is knowledge gap as to why this is happening despite the advancement in nursing education and without utilizing nursing research findings, nursing knowledge will become stagnated and obsolete.

Despite the emphasis given at the research utilization, evidence have shown that there is insufficient data on level of nurses' participation and utilization of research in this part of the world. Hence, this study assessed nurses' participation research, determined the attitude of nurses in clinical settings toward research utilization, identified barriers to research participation and utilization among professional nurses and also identified facilitators of research participation and utilization among nurses.

## MATERIALS AND METHODS

This Study that was conducted among nurses of Obafemi Awolowo University Teaching Hospital Complex, Ile Ife adopted a descriptive cross-sectional research design. A calculated sample of 265 respondents were selected proportionately and Ethical Approval for the conduct of the study was obtained from Ethics and Research Committee of institution with approval number ERC/2020/02/08.

A Structured questionnaire that was adapted from standard scales developed by Funk et al., (1991) and Hutchinson and Johnston (2004) were used for data collection. The questionnaire had five Sections; Section A assessed Socio demographic data of the respondents, section B, had 13 items that assessed research participation among nurses, Section C consisted of 12 items that determined nurses' attitude towards research utilization in clinical practice, Section D & E identified barriers and facilitators to research participation and utilization. The means of the facilitating factors were ranked using five points Likert scale.

Face and content validity were ascertained by an expert in the field of nursing and education. Ambiguous questions were reframed to suite the purpose of the study, while inappropriate words were deleted. In order to determine the reliability of the questionnaire, a pilot study test was conducted among 27 nurses at Seventh Day Adventist Hospital, Ile Ife, which is approximately 10 % of the sample size. The reliability of the questionnaire was determined using Cronbach's Alpha model with correlational coefficient value of 0.72.

Data collection commenced after Ethical Approval was obtained from the hospital's Ethics and Research Committee. The director of nurses and the charge nurses of each unit gave permission commencement of data collection and this was completed in six weeks. Data were analysed using Statistical Package for Social Sciences (SPSS) version 25.0. Frequency tables, pie chart and cross tabulation were the descriptive statistics used to present the summary of the data while chi square was inferential statistic used in testing the hypothesis at a level of significant value 0.05.

## RESULTS

**Table 1**  
*Socio Demographic variables of the Respondents*

<b>Variables</b>	<b>Frequency N265</b>	<b>Percentage %</b>
Sex		
Female	234	88.3
Male	31	11.7
Age		
20-29	75	28.3
30-39	141	53.2
40-49	44	16.6
50 and above	5	1.9
Marital Status		
Single	67	25.2
Married	194	73.2
Separated	2	0.8
Divorced	2	0.8
Professional Qualification		
RN/RM	182	68.7
RN/RPHN	27	10.2
RN/RPON	15	5.7
Others	41	15.5
Highest Educational Qualification		
Diploma (nursing)	93	35.1
Bachelor degree	145	54.7
Master degree	27	10.2
Years of Clinical Experience		
<than 1 year	17	6.4
1-5 year	46	17.4
6-10 year	108	40.7
10 year and Above	94	35.5
Current position		
NOII	97	36.6
NO I	70	26.4
SNO	47	17.7
ACNO	30	11.3
CNO	16	6.0
ADNS	4	1.5
DNS	1	0.4
Nursing Research Course Undertaken in the Past Three Years		
Yes	165	62.3
No	100	37.7
Do you Participate in Clinical Research		
Yes	174	65.7
No	91	34.3

Table 1 revealed the distribution of the respondents in Obafemi Awolowo University, Ile Ife as follows; majority (88.3%) of the respondents were female while only 11.7% were males. 73.2% were married and little above half (53.2%) of the respondents were between 30-39 years of age with the mean age of 32.95. More than half (54.7%) of the

respondents possess bachelor's degree in nursing as their highest level of education, while less than half (40.7%) have a working experience of 6-10 years, while 35.5% of the respondents have a working experience of 10 years and above and 36.6% of the respondents are currently Nursing Officer II.

**Table 2**  
*Nurses' Participation in Research*

<b>Variables</b>	<b>Frequency</b>	<b>Percentage</b>
Have you ever participated in any research study?		
Yes	251	94.7
No	14	5.3
If Yes, what was the Purpose		
Academic qualification	212	80.0
Professional qualification	24	9.1
To test new method of care	6	2.3
To test new drug	9	3.4
How often do you participate in research related to your work?		
Very often	15	5.7
Often	80	30.2
Rarely	145	54.7
Not at all	25	9.4
Have you participated in research in the last three years?		
Yes	117	44.2
No	148	55.8
What role did you play in the previous studies?		
Principle investigation	85	32.1
Member of research team	45	17.0
Research assistant	26	9.8
Research implementation	25	9.4
Are you currently engaged in any research projects or activities?		
Yes	94	35.5
No	171	64.5
If yes, what role are you playing?		
Principal Investigator	78	29.4
Member of research team	9	3.4
Research Assistant	10	3.8
Research Implementation	11	4.2
Has research added value to your practice?		
Yes	241	90.9
No	24	9.1
Participating in research can improve one's professional status		

Yes	248	93.6
No	17	6.4
Only very few nurses participated as a Principal Investigator		
Yes	199	75.1
No	66	24.9
Nurses do not have much interest in research Participation		
Yes	166	62.6
No	99	37.4
Majority of nurses that participated in research, do it as study participant not as a Principal Investigator		
Yes	198	74.7
No	67	25.3
Do you perceive research participation as part of nursing role?		
Yes	238	89.8
No	27	10.2
Many people don't realize that nurses conduct research too		
Yes	207	78.1
No	58	21.8
Have you ever Published a research work?		
Yes	36	13.6
No	229	86.4

Table 2 showed that majority (94.7%) of the respondents have participated in research, more than half (54.7%) rarely participate in research related to their work while more than half (55.8%) of the respondents did not participate in research in the last three years.

Also, 75.1% of the respondents participated as a principal investigator while majority of the respondents 89.8% perceived research participation as part of nursing role and 86.4% of the respondents have published a research work.

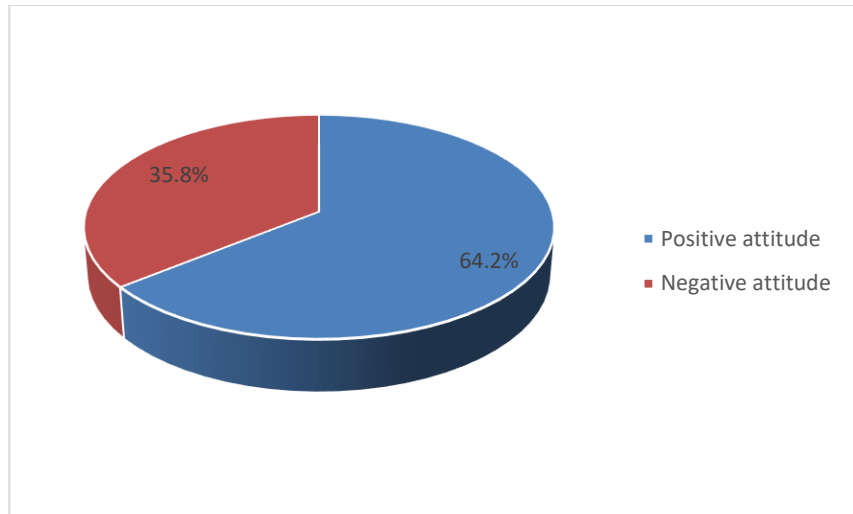
**Table 3**  
*Nurses Attitude towards Research Utilization in the Clinical Practice*

S/N	Variables	SA	A	D	SD
1	Research utilization play a role in developing and empowering nurses and improving the quality of nursing care provided for patients.	120(45.3)	128(48.3)	8.5(3.2)	8.5(3.2)
2	Have you ever put into practice any of research conducted so far?	105(39.6)	90(34)	40(15.1)	30(11.3)
3	Research Utilization remain a challenge for many nurses in practice	90(33.9)	120(45.3)	31(11.7)	24(9.1)
4	Nurses do not know how to use research findings in Practice	44(16.6)	51(19.2)	99(37.4)	71(26.8)
5	Do you find it easy to explore research findings in patient care?	102(38.5)	61(23.)	53(20)	49(18.5)
6	Were you welcomed by your superior while exploring it?	99(37.4)	52(19.6)	96(36.2)	18(6.8)
7	Incorporating nursing research findings into practice will improve outcome of patient care and promote evidence-based nursing practice	120(45.3)	125(47.2)	12(4.5)	8(3)
8	Without utilizing research findings in clinical practice, nursing knowledge will be Obsolete	128(48.3)	115(43.4)	9(3.4)	13(4.9)
9	Utilizing research findings not only will improve the quality and standard of nursing care but also can lead to nurses' personal and professional development	243(91.7)	22(8.3)	9(3.4)	13(4.9)
10	Nurses do not have much interest in research utilization	62(23.4)	60(22.3)	73(27.5)	71(26.8)
11	Transferring nursing research findings into clinical practice is cumbersome for nurses	70(26.4)	66(24.9)	65(24.5)	64(24.2)
12	Reducing workload through increase staff strength in the Hospitals will promote nursing research utilization.	243(91.7)	22(8.3)	128(48.3)	115(43.4)

*Key: SA-Strongly Agree, A-Agree, D-Disagree and SD-Strongly Disagree*

Table 3 The table above revealed nurses' attitude towards research utilization in the clinical practice. Majority 93.6% of the respondents either agreed or strongly disagree that research utilization play a role in developing and empowering nurses, improving the quality of care provided for patients, 73.6% of the respondents strongly agreed or agreed that they have put into practice the research they've conducted so far. 79.2% concur that research utilization remain a challenge for many nurses in practice while 64.2% did not agree that nurses do not know how to use research findings in practice. 61.5% find it easy to explore research findings in patient care, while 57% reported that they are welcomed by your superior while exploring it, 92.5% agreed that incorporating nursing

research findings into practice will improve outcome of patient care and promote evidence-based clinical nursing practice, 91.7% submitted that without utilizing research findings in clinical practice, nursing knowledge will be obsolete, another 91.7% agreed that utilizing research findings not only will improve the quality and standard of nursing care but also can lead to nurses' personal and professional development. More than half of the respondents (54.3%) disagree that nurses do not have much interest in research utilization. 51.3% agreed that transferring nursing research findings into clinical practice is cumbersome for nurses, 91.7% also agreed that reducing workload through increase staff strength in the Hospitals will promote nursing research utilization.



**Figure 1 Summary of Nurses Attitude towards Research Utilization in Clinical Practice**

The graph above revealed the nurses’ attitude towards research utilization in the clinical practice. Using two level ordinal grading system (Positive attitude, Negative attitude). It

was revealed that majority of the respondents 64.2% possess positive attitude towards research utilization in the clinical practice, 35.8% have a negative attitude.

**Table 4**  
*Perceived Barriers to Research Utilization by Nurses*

Variables	Frequency	Percentage
Cultural difference	56	21.1
Finance	119	45.0
Government policy	12	4.5
Inadequate knowledge	82	30.9
Workload/Staff shortage	132	49.8
Poor dissemination of research	52	19.6
Organization structure	28	10.6

Table 4 revealed perceived barriers to research utilization. Almost half of the respondents (49.8%) reported that workload/staff shortage were barriers to research utilization, 45.0% finance, 30.9% perceived inadequate

knowledge, 21.1% said cultural difference, 19.6% poor dissemination of research while 10.6% claim organizational structure was also a barrier.



**Table 5**  
*Facilitators to Research Utilization by Nurses*

Variables	1	2	3	4	5	Mean±SD	Rank
Improved understanding of research reports	41(15.5)	24(9.0)	57(21.5)	143(54.0)	0(0.0)	2.86±1.11	1
Advanced education increases research knowledge base	43(16.2)	30(11.3)	33(12.5)	158(59.6)	1(0.4)	2.83±1.16	2
Conducting more clinically focused and relevant research	38(14.3)	30(11.3)	44(16.6)	150(56.6)	3(1.1)	2.81±1.12	3
Improving availability and accessibility of research reports	40(15.1)	24(9.1)	48(18.1)	150(56.6)	3(1.1)	2.80±1.12	4
Enhancing managerial support and encouragement of research implementation	39(14.7)	23(8.7)	51(19.2)	151(57.0)	1(0.4)	2.80±1.10	5
Employing nurses with research skills to serve as role models	38(14.3)	27(10.2)	40(15.1)	158(59.6)	2(0.8)	2.78±1.12	6
Providing colleague support networks/mechanisms	36(13.6)	28(10.6)	43(16.2)	155(58.5)	3(1.1)	2.77±1.10	7
Increasing the time available for reviewing and implementing research findings	39(14.7)	24(9.1)	44(16.6)	154(58.1)	4(1.5)	2.77±1.12	8

Keys: 1- To no extent; 2- To a little extent; 3- To a moderate extent; 4- To a greater extent; 5- No opinion. The mean was ranked based on responses of respondents using five points Likert

Table 5 showed facilitators to research utilization among nurses. 72.1% of the respondents identified mandatory training while 56.2% identified reward and motivation.

Table 6 shows the chi-square test used to test the association between selected socio

demographic and participation in research. From the result none of the variable were statistical associated with participation in research.

**Table 6**

*Chi-square test showing the Association between participation in research and selected socio-demographic Characteristics*

Variables	Participation		$\chi^2$	df	p-value
	Participate	Not Participate			
Gender					
Female	155(66.2)	79(33.8)	0.29	1	0.586
Male	19(61.3)	12(38.7)			
Highest Educational Qualification					
Diploma (nursing)	53(57.0)	40(43.0)	4.97	2	0.083
Bachelor degree	103(71.0)	42(29.0)			
Master degree	18(66.7)	9(33.3)			
Years of Clinical Experience					
<than 1 year	9(52.9)	8(47.1)	2.97	3	0.39
1-5 year	27(58.7)	19(41.3)			
6-10 year	75(69.4)	33(30.6)			
10 year and Above	63(67.0)	31(33.0)			

Hypothesis: There is no significant association between selected socio demographic and participation in research

Table 6 showed the chi-square test used to test the association between selected socio demographics and participation in research. From the result none of the variable were statistical associated with research participation. Hence, there is a very weak significant ( $p=0.083$ ) relationship between educational qualifications and participation in research.

## DISCUSSION

The participants were majorly female. This finding is consistent with other studies that classify nurses as a female profession (11,12). majority were within the age range of 30-39years (73.8%), this indicate that the sample size comprises of experience nurses working in different specialties, which are expected to have positive attitude towards research utilization. The Senior Nursing Officer, Nursing Officer II and I constituted significant percentage (80.7%) of the study participants, which form bulk of the nurses directly involved in patient care, these officers supposed to be the forefront of implementing research findings. Very few of the respondents possess a second degree, majority possess a first degree, while few have diploma in nursing has their highest level of qualification, this implies that, they might all have formal education in research methods. The result also shown that, 54,7% rarely participated in research related to their work, 55.8% have not participated in research in last two years.

The results showed that majority of respondents participate in nursing research., this however contrary to Chien *et al*, 2013 who reported that only a very few of her respondents participated in clinical research despite the high number of nurses who are

Bachelor degree holders represents half of the nursing work force [10].

The Study showed that majority of respondents, have positive attitude towards research utilization in clinical practice. This is similar to a study conducted by Yava *et al.*, (2009) in Turkey who reported that 66.1% of respondents have positive attitude to research utilization [13]. However, Usyal *et al.* (2010) reported a negative attitude [7].

The perceived barriers mostly recognized are workload/staff shortage and finance, this is in line with the study conducted in Eastern Turkey where lack of time to implement new ideas, lack of enough power and authority to change the methods and pattern of care, and lack of sufficient time for reading the studies were the most important barrier to research utilization [14]. Chien *et al*, (2013) also talked about shortage of man power, overwhelming work load, time constraints for literature review, application of research findings into practice and participation in research activities as barriers to evidence-based practice [10].

Result of the study showed that facilitators to research utilization are improving the understandability of research reports, advanced education to increase research knowledge base, mandatory training and rewards and motivation. This view is shared by Shavestehford *et al.* (2011) who said conducting in-service training courses on new research findings, training nurses for further information on research methodology and equipping hospital library with a variety of journals and internet access were the most important facilitators. The study is similar to the position of Adebajo and Olubiyi 2008 in their view factors behind in the attainment of graduate and post graduate qualification in today world may be attributed that will facilitate participation and utilization of

research [15]. This study is also in line with findings of Chien *et al* (2013), who pointed that facilitator to research utilization, high need for research education encouragement to enable nurses to initiate or implement evidence-based practice [10].

The result of the study showed no significant association between participation in research and attitude towards research utilization in clinical practice.

Also, the result showed that there was no significant relationship between selected Socio demographics and participation in research. The above result is a bit contradictory with the result of study conducted by Isaac *et al* (2018) which reported that educational qualification of nurses was found to be associated with participation in clinical research while nurses' years of practice, gender and rank in the profession were not found to be associated with participation in the research [16]. Similarly, studies in Nigeria by Asuquo *et al* (2013) identified a significant relationship existed between nurses' educational qualification and their involvement in research after nursing education [17].

#### Implication for Nursing Practice

From the study, it was reported that although majority of nurses had previously participated in research, those who have taken the role of principal investigator were just 32.1%. This means the key barriers recognized by nurses such as finance and not seeing the value of research need to be worked on by stakeholders. Healthy competition can be created by providing incentives for those interested in performing research, seminars on research can be organized. Furthermore, scientific sessions need to be organized frequently among nurses as this will promote research participation among nurses.

## CONCLUSION

The study concluded that although reasonable percentage of nurses participated in research, most do not take the role of the principal investigator. Thus, there is still a need for dissemination of additional information on the importance of research as the back bone of the profession in clinical practice.

Therefore, it is recommended that an elaborate in-depth qualitative study be conducted to explore factors responsible for nurses inconsistent in research participation and barriers to utilization of research in nursing practice in the study setting.

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